

Work Order ID 110258

December-17-13 9:19:32 AM

\*110258\*

Page 1

Item ID: D3631-1

Accept

\*N900040100\*

Setup Start

\*NS1\*

Revision ID:

Item Name: Washer

100

Stop

\*NS2\*

Start Date: 12/17/13 Start Qty: 40.00

\*40\*

Cust Item ID:

Required Date: 12/17/13 Req'd Qty: 40.00

\*40\*

Customer:

Reference:

Approvals: Process Plan: ML5

Date: 12-12-17

Tooling:

Date:

Run Start

\*NR1\*

QC: \_\_\_\_\_

Date: \_\_\_\_\_

SPC (Y/N):

Date: \_\_\_\_\_

Stop

\*NR2\*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D3631	Rev A								

100

\*100\*

PURCHASING

Purchasing

Memo

0.00

CD 13/12/19 100

Purchasing

Issue P/O: 02437 Purchase Part Number: 95606A170 Supplier: Mc  
Master Carr Certificate of conformity is required

110

\*110\*

Packaging

Receive & Inspect for Damage & Mat'l Certs

0.00

Packaging

Memo

0.00

Ensure certificate of conformity is attached

13/12/19 (100)

120

\*120\*

QC

Quality Control

QC6- Inspect dimensions to drawing

0.00

DAS  
27  
9-89

0.00

12/12/19

100

DQA:

Date:



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed:

Date:

Work Order update only 

Work Order: _____ Part No. _____ NCR No. _____	<b>DISPOSITION</b> Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/>	<b>AGAINST DEPARTMENT/PROCESS</b> Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> Water Jet <input type="checkbox"/> Prod. Eng. Coor. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/>
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Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

### FAULT CATEGORY

Landing Gear	General	Folio/Program	Outside Dimensions
Bending	Bend <input type="checkbox"/>	Grain <input type="checkbox"/>	Pressure/Forced <input type="checkbox"/>
Centre Not Concentric	BOM/Route <input type="checkbox"/>	Hardware <input type="checkbox"/>	Set-up <input type="checkbox"/>
Cracks	Broken/Damage/Defect <input type="checkbox"/>	Inspection Incomplete/Unqualified <input type="checkbox"/>	Temperature/Cure <input type="checkbox"/>
Crimp/Kink/Ripple/Wave	Burrs <input type="checkbox"/>	Instructions Incomplete/Unclear <input type="checkbox"/>	Weld <input type="checkbox"/>
Cuffs	Contamination <input type="checkbox"/>	Misaligned/off center <input type="checkbox"/>	Wrong Stock Pulled <input type="checkbox"/>
Crushing	Countersink <input type="checkbox"/>	Mislabeled <input type="checkbox"/>	
Heat Treat	Cut Too Short <input type="checkbox"/>	Misread <input type="checkbox"/>	
Inspection Strip in Tube	Drawing <input type="checkbox"/>	Off-set <input type="checkbox"/>	
Marks/Chatter	Drill Holes <input type="checkbox"/>	Out of Calibration <input type="checkbox"/>	
Turning Sequence	Finish <input type="checkbox"/>	Out of Sequence <input type="checkbox"/>	
Wave/Twist in Tube	Fit/Function <input type="checkbox"/>		

**Work Order ID 110258****\*110258\***

Page 2

December-17-13 9:19:32 AM

Item ID: D3631-1

Accept

**\*N900040100\***

Setup Start

**\*NS1\***

Revision ID:

Item Name: Washer

Stop

**\*NS2\***

Start Date: 12/17/13

Start Qty: 40.00

**\*40\***

Cust Item ID:

Required Date: 12/17/13

Req'd Qty: 40.00

**\*40\***

Customer:

Reference:

Approvals:	Process Plan:	Date:	Tooling:	Date:	Run	Start	<b>*NR1*</b>
	QC:	Date:	SPC (Y/N):	Date:	Stop		<b>*NR2*</b>

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	Identify as per dwg & Stock Location: <u>FP001</u>	0.00							DAS
<b>*130*</b> Packaging	Memo	0.00				100X	28 9.99	15-12-27	
Packaging									
140	QC21- Final Inspection - Work Order Release	0.00							<u>PL14-01-1</u>
<b>*140*</b> QC	Memo	0.00							
Quality Control									<u>PL14-01-1</u>

PL14-01-1PL14-01-1PL14-01-1PL14-01-1PL14-01-1

DQA: \_\_\_\_\_

Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_

Date: \_\_\_\_\_

Work Order update only 

Work Order: _____			<b>DISPOSITION</b>			<b>AGAINST DEPARTMENT/PROCESS</b>																																																																																																			
Part No. _____			Rework <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>																																																																																																		
NCR No. _____			Scrap <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Quality <input type="checkbox"/>																																																																																																		
			Use-as-is <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>																																																																																																		
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Landing Gear				<table border="0" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2" style="width: 25%;"></td> <td colspan="2" style="width: 25%; text-align: center;"><b>General</b></td> <td colspan="2" style="width: 25%;"></td> <td colspan="2" style="width: 25%;"></td> </tr> <tr> <td style="width: 10%;"><input type="checkbox"/></td> <td>Bending</td> <td style="width: 10%;"><input type="checkbox"/></td> <td>Bend</td> <td style="width: 10%;"><input type="checkbox"/></td> <td>Folio/Program</td> <td style="width: 10%;"><input type="checkbox"/></td> <td>Outside Dimensions</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Centre Not Concentric</td> <td><input type="checkbox"/></td> <td>BOM/Route</td> <td><input type="checkbox"/></td> <td>Grain</td> <td><input type="checkbox"/></td> <td>Pressure/Forced</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Cracks</td> <td><input type="checkbox"/></td> <td>Broken/Damage/Defect</td> <td><input type="checkbox"/></td> <td>Hardware</td> <td><input type="checkbox"/></td> <td>Set-up</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Crimp/Kink/Ripple/Wave</td> <td><input type="checkbox"/></td> <td>Burrs</td> <td><input type="checkbox"/></td> <td>Inspection Incomplete/Unqualified</td> <td><input type="checkbox"/></td> <td>Temperature/Cure</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Cuffs</td> <td><input type="checkbox"/></td> <td>Contamination</td> <td><input type="checkbox"/></td> <td>Instructions Incomplete/Unclear</td> <td><input type="checkbox"/></td> <td>Weld</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Crushing</td> <td><input type="checkbox"/></td> <td>Countersink</td> <td><input type="checkbox"/></td> <td>Misaligned/off center</td> <td><input type="checkbox"/></td> <td>Wrong Stock Pulled</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Heat Treat</td> <td><input type="checkbox"/></td> <td>Cut Too Short</td> <td><input type="checkbox"/></td> <td>Mislabeled</td> <td><input type="checkbox"/></td> <td> </td> </tr> <tr> <td><input type="checkbox"/></td> <td>Inspection Strip in Tube</td> <td><input type="checkbox"/></td> <td>Drawing</td> <td><input type="checkbox"/></td> <td>Misread</td> <td><input type="checkbox"/></td> <td> </td> </tr> <tr> <td><input type="checkbox"/></td> <td>Marks/Chatter</td> <td><input type="checkbox"/></td> <td>Drill Holes</td> <td><input type="checkbox"/></td> <td>Off-set</td> <td><input type="checkbox"/></td> <td> </td> </tr> <tr> <td><input type="checkbox"/></td> <td>Turning Sequence</td> <td><input type="checkbox"/></td> <td>Finish</td> <td><input type="checkbox"/></td> <td>Out of Calibration</td> <td><input type="checkbox"/></td> <td> </td> </tr> <tr> <td><input type="checkbox"/></td> <td>Wave/Twist in Tube</td> <td><input type="checkbox"/></td> <td>Fit/Function</td> <td><input type="checkbox"/></td> <td>Out of Sequence</td> <td><input type="checkbox"/></td> <td> </td> </tr> </table>								<b>General</b>						<input type="checkbox"/>	Bending	<input type="checkbox"/>	Bend	<input type="checkbox"/>	Folio/Program	<input type="checkbox"/>	Outside Dimensions	<input type="checkbox"/>	Centre Not Concentric	<input type="checkbox"/>	BOM/Route	<input type="checkbox"/>	Grain	<input type="checkbox"/>	Pressure/Forced	<input type="checkbox"/>	Cracks	<input type="checkbox"/>	Broken/Damage/Defect	<input type="checkbox"/>	Hardware	<input type="checkbox"/>	Set-up	<input type="checkbox"/>	Crimp/Kink/Ripple/Wave	<input type="checkbox"/>	Burrs	<input type="checkbox"/>	Inspection Incomplete/Unqualified	<input type="checkbox"/>	Temperature/Cure	<input type="checkbox"/>	Cuffs	<input type="checkbox"/>	Contamination	<input type="checkbox"/>	Instructions Incomplete/Unclear	<input type="checkbox"/>	Weld	<input type="checkbox"/>	Crushing	<input type="checkbox"/>	Countersink	<input type="checkbox"/>	Misaligned/off center	<input type="checkbox"/>	Wrong Stock Pulled	<input type="checkbox"/>	Heat Treat	<input type="checkbox"/>	Cut Too Short	<input type="checkbox"/>	Mislabeled	<input type="checkbox"/>		<input type="checkbox"/>	Inspection Strip in Tube	<input type="checkbox"/>	Drawing	<input type="checkbox"/>	Misread	<input type="checkbox"/>		<input type="checkbox"/>	Marks/Chatter	<input type="checkbox"/>	Drill Holes	<input type="checkbox"/>	Off-set	<input type="checkbox"/>		<input type="checkbox"/>	Turning Sequence	<input type="checkbox"/>	Finish	<input type="checkbox"/>	Out of Calibration	<input type="checkbox"/>		<input type="checkbox"/>	Wave/Twist in Tube	<input type="checkbox"/>	Fit/Function	<input type="checkbox"/>	Out of Sequence	<input type="checkbox"/>	
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# Picklist Print

December-17-13 9:19:31 AM

Page 1

**Work Order ID:** 110258  
**Parent Item:** D3631-1 **Start Date:** 12/17/13 **Required Date:** 12/17/13  
**Parent Item Name:** Washer **Start Qty:** 40.00 **Required Qty:** 40.00  
**Comments:** IPP Rev:A New Issue 07-07-28 JLM Verified By:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
95606A170 Washer		Purchased	No		110		Each	0.0000	1	40	100		

13/12/20 00

DQA: \_\_\_\_\_

Date: \_\_\_\_\_

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: \_\_\_\_\_

Date: \_\_\_\_\_

Work Order update only 

Work Order: _____	<b>DISPOSITION</b>	<b>AGAINST DEPARTMENT/PROCESS</b>					
Part No. _____	Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/>	Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/>	Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/>	Water Jet <input type="checkbox"/> Prod. Eng. Coor. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/>	Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/>		

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

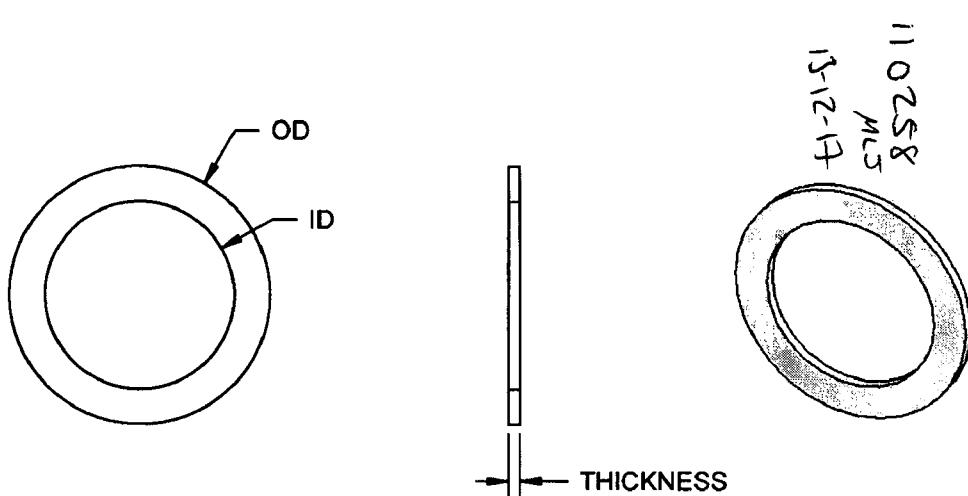
**FAULT CATEGORY**

Landing Gear	General	Folio/Program	Outside Dimensions	Pressure/Forced
Bending	Bend	Grain	Over/Under tolerance	Set-up
Centre Not Concentric	BOM/Route	Hardware	Part Incorrect	Temperature/Cure
Cracks	Broken/Damage/Defect	Inspection Incomplete/Unqualified	Part Lost/Missing	Weld
Crimp/Kink/Ripple/Wave	Burrs	Instructions Incomplete/Unclear	Part Moved	Wrong Stock Pulled
Cuffs	Contamination	Misaligned/off center	Positioned Wrong	
Crushing	Countersink	Mislabeled	Power Loss/Surge	Other
Heat Treat	Cut Too Short	Misread		
Inspection Strip in Tube	Drawing	Off-set		
Marks/Chatter	Drill Holes	Out of Calibration		
Turning Sequence	Finish	Out of Sequence		
Wave/Twist in Tube	Fit/Function			

**DART**

DESIGN CB	DRAWN BY CB	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED PH	APPROVED <del>#</del>	DRAWING NO. D3631	REV. A SHEET 1 OF 1
DATE 07.05.16		TITLE WASHER	SCALE NTS
REV A	DATE 07.05.16	DESCRIPTION NEW ISSUE	

## **SPECIFICATION CONTROL DRAWING**

**D3631 WASHER****RELEASED**  
07.08.02 ~~#~~

PART NUMBER	OD	ID	THICK	IS	MATERIAL	SUPPLIER
D3631-1	0.688	0.500	0.0625		NYLON	McMASTER-CARR P/N: 95606A170

**NOTES:**

- 1) TOLERANCES ARE PER DART QS 18 UNLESS OTHERWISE NOTED
- 2) ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID PO22437

Purchase Order Date 12/19/2013

PO Print Date 12/19/2013

Page Number 1 of 3

Order From : VU-MCM001  
MCMASTER-CARR SUPPLY CO,  
P.O. BOX 7690  
CHICAGO, IL 60680-7690  
US

Ship To : DART AEROSPACE LTD  
1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

Contact Name  
Vendor Phone 330 995 5500  
  
Ship To Contact  
Ship To Phone  
Ship Via: FedEx PI collect  
Ship Acct:

Buyer Chantal Lavoie  
Customer POID  
Customer Tax # 10127-2607  
Terms Net 10  
Currency USD  
FOB FCA - (Free Carrier)

*REVISED*

Line Nbr	Reference Vendor Part Number	Description/ Mfg ID	Req Date/ Taxable	CD	Req Qty/ Unit of Measure	PO Unit Price	Extended Price
Line Comments			Promise Date				
Delivery Comments							
1	92311A639	SS SET SCREW	12/20/2013 Yes 12/20/2013	100.00 Each		\$0.64	\$63.60
		AS PER DWG D2747 REV. B B110232			Line Total:		\$63.60
2	95606A170	Washer	12/20/2013 Yes 12/20/2013	100.00 Each		\$0.09	\$8.60
		AS PER DWG D3631 REV. A B110258			Line Total:		\$8.60
3	71400-20	53355T71 SHOP COAT SIZE: 42	12/20/2013 Yes 12/20/2013	1.00 Each		\$31.04	\$31.04

Note:

# McMASTER-CARR.

200 Aurora Industrial Pkwy  
Aurora OH 44202-8087  
330-995-5500  
cle.sales@mcmaster.com

Dart Aerospace Ltd  
1270 Aberdeen St  
Hawkesbury ON K6A 1K7  
Canada

Purchase Order  
PO22437

Page 1 of 2

Order Placed By  
Chantal Lavoie

12/19/2013

McMaster-Carr Number  
5833211-01

Line	Description	Ordered	Shipped
1	92311A639 18-8 Stainless Steel Cup Point Set Screw, 3/8"-24 Thread, 1" Long, Packs of 10 Your Part Number: B110232	10 Packs	10
	Unit Price: \$6.36 Extended Price: \$63.60		
2	95606A170 Nylon 6/6 General Purpose Flat Washer, Off-White, 7/16" Screw Size, .69" OD, .02"-.04" Thickness, Packs of 100 Your Part Number: B110258	1 Pack	1
	Unit Price: \$8.60 Extended Price: \$8.60		
3	53355T71 Polyester/Cotton Blend Shop Coat, Dark Blue, Size 42 Your Part Number: 71400-20	1 Each	1
	Unit Price: \$31.04 Extended Price: \$31.04		
4	92375A325 Type 316 Stainless Steel Reusable Hairpin Cotter Pin, Fits 7/16" to 3/4" Pin Diameter, 2-5/8" Length, Packs of 10 Your Part Number: 71550-10 JESSE WATER JET	5 Packs	5
	Unit Price: \$10.13 Extended Price: \$50.65		

Dart Aerospace Ltd

EXP  
INV  
NAF



401  
8 lir

Me

12x12x12

FW1WBP  
12/19/201  
12:23:12:  
661  
Cycle 42

1140966510309

